



PTO/SB/08A (10-01)

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 1 of 4

Complete if Known

Application Number	10/782,270
Filing Date	February 18, 2004
First Named Inventor	Teck Kheng Lee
Group Art Unit	2815
Examiner Name	J. Clark
Attorney Docket Number	2269-4973.1US (00-0593.01/US)

U.S. PATENT DOCUMENTS					
Examiner Initials *	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
jbe		US - 3,239,496	03/1966	Jursich	
		US - 4,074,342	02/1978	Honn et al.	
		US - 4,818,728	04/1989	Rai et al.	
		US - 5,148,265	09/1992	Khandros	
		US - 5,346,861	09/1994	Khandros	
		US - 5,404,044	04/1995	Booth et al.	
		US - 5,468,681	11/1995	Pasch	
		US - 5,489,804	02/1996	Pasch	
		US - 5,679,977	10/1997	Khandros	
		US - 5,683,942	11/1997	Kata	
		US - 5,742,100	04/1998	Schroeder et al.	
		US - 5,777,391	07/1998	Nakamura	
		US - 5,821,624	10/1998	Pasch	
		US - 5,905,303	05/1999	Kata	
		US - 6,022,761	02/2000	Gruppen-Shemansky et al.	
		US - 6,048,755	04/2000	Jiang et al.	
		US - 6,133,072	10/17/2000	Fjelstad	
		US - 6,133,637	10/2000	Hikita et al.	
		US - 6,177,723	01/2001	Eng et al.	
		US - 6,217,343	04/2001	Okuno	
		US - 6,222,265	04/2001	Akram et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials *	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				
jbe		EP 0475022 A1	03/18/1992	Grube et al.		
		EP 684644	11/1995	Kata et al.		
		EP 0997942 A2	05/03/2000	Horiuchi et al.		
		EP 1009027	06/2000	Okuno		
jbe		KR 2001054744	07/2001	Choi et al. (English Abstract)		x

Examiner Signature	Jasmine Clark	Date Considered	01/20/05
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mbe		US - 6,232,666	05/2001	Corisis et al.	
		US - 6,242,932	06/2001	Hembree	
		US - 6,265,775	07/2001	Seyyedy	
		US - 6,271,469	08/07/2001	Ma et al.	
		US - 6,291,265	09/2001	Mess	
		US - 6,291,884	09/18/2001	Glenn et al.	
		US - 6,295,730	10/2001	Akram	
		US - 6,338,985	01/2002	Greenwood	
		US - 6,468,831	10/2002	Leong et al.	
		US - 6,482,676	11/2002	Tsunoi et al.	
		US - 6,489,676	12/2002	Taniguchi et al.	
		US - 6,515,324 B2	02/2003	Shibuya et al.	
		US - 6,586,830 B2	07/2003	Saito	
		US - 6,714,418	03/2004	Frankowsky et al.	
		US - 6,744,122	06/2004	Hashimoto	
		US - 6,756,251	06/2004	Lee	
		US - 6,791,195	09/2004	Urushima	
		US - 2001/024129 A1	09/27/2001	Akram et al.	
		US - 2001/053563 A1	12/20/2001	Kim et al.	
		US - 2002/0045611 A1	04/2002	Abrams et al.	
		US - 2002/0079594 A1	06/2002	Sakurai	
		US - 2002/0142513 A1	10/2002	Fee et al.	
		US - 2002/0185661 A1	12/2002	Kawanobe et al.	
		US - 2003/0134450 A1	07/2003	Lee	

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Sheet 3 of 4

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First Named Inventor	Teck Kheng Lee
Group Art Unit	2815
Examiner Name	J. Clark
Attorney Docket Number	2269-4973 IUS/(00-0593 01/IIS)

NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
Jbe		AL-SARAWI et al., "A review of 3-D packaging technology," <i>Components, Packaging, and Manufacturing Technology, Part B: IEEE Transactions on Advanced Packaging</i> , Vol 21, Issue 1, Feb. 1998, pp. 2-14.	
		ANDROS et al., "TBGA Package Technology," <i>Components, Packaging, and Manufacturing Technology, Part B: IEEE Transactions on Advanced Packaging</i> , Vol. 17, Issue 4, Nov. 1994, pp. 564-568.	
		CLOT et al., "Flip-Chip on Flex for 3D Packaging," 1999. 24 th IEEE/CPMT, 18-19 Oct. 1999, pp. 36-41.	
		FERRANDO et al., "Industrial approach of a flip-chip method using the stud-bumps with a non-conductive paste," <i>Adhesive Joining and Coating Technology in Electronics Manufacturing</i> , 2000. Proceedings. 4 th International Conference on, 18-21, June 2000, pp. 205-211.	
		GALLAGHER et al., "A Fully Additive, Polymeric Process for the Fabrication and Assembly of Substrate and Component Level Packaging," <i>The First IEEE International Symposium on Polymeric Electronics Packaging</i> , 26-30, Oct. 1997, pp. 56-63.	
		GEISSINGER et al., "Tape Based CSP Package Supports Fine Pitch Wirebonding," <i>Electronics Manufacturing Technology Symposium</i> , 2002, IEMT 2002, 27 th Annual IEEE/SEMI International, 17-18 July 2002, pp. 41-452.	
		HATANAKA, H., "Packaging processes using flip chip bonder and future directions of technology development," <i>Electronics Packaging Technology Conference</i> , 2002. 4 th , 10-12, Dec. 2002, pp. 434-439.	
		HAUG et al., "Low-Cost Direct Chip Attach: Comparison of SMD Compatible FC Soldering with Anisotropically Conductive Adhesive FC Bonding," <i>IEEE Transactions on Electronics Packaging Manufacturing</i> , Vol. 23, No. 1, Jan 2000, pp. 12-18.	
		KLOESER et al., "Fine Pitch Stencil Printing of Sn/Pb and Lead Free Solders for Flip Chip Technology," <i>IEEE Transactions of CPMT - Part C</i> , vol. 21, No. 1, 1998, pp. 41-49.	
		LEE et al., "Enhancement of Moisture Sensitivity Performance of a FBGA," <i>Proceedings of International Symposium on Electronic Materials & Packaging</i> , 2000, pp. 470-475.	
Jbe		LI et al., "Stencil Printing Process Development for Flip Chip Interconnect," <i>IEEE Transactions Part C: Electronics Packaging Manufacturing</i> , Vol. 23, Issue 3, (July 2000), pp. 165-170.	

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		Group Art Unit	2815
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Sheet	4	of	4

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ylbe		LYONS et al., "A New Approach to Using Anisotropically Conductive Adhesives for Flip-Chip Assembly, Part A," <i>IEEE Transactions on Components, Packaging, and Manufacturing Technology</i> , Vol. 19, Issue 1, March 1996, pp. 5-11.	
		TEO et al., "Enhancing Moisture Resistance of PBGA," <i>Electronic Components and Technology Conference</i> , 1998. 48 th IEEE, 25-28 May 1998, pp. 930-935.	
		TEUTSCH et al., "Wafer Level CSP using Low Cost Electroless Redistribution Layer," <i>Electronic Components and Technology Conference</i> , 2000. 2000 Proceedings. 50 th , 21-24 May 2000, pp. Pages: 107-113.	
		"The 2003 International Technology Roadmap for Semiconductor: Assembly and Packaging."	
		TSUI et al., "Pad redistribution technology for flip chip applications," <i>Electronic Components and Technology Conference</i> , 1998. 48 th IEEE, 25-28 May 1998, pp. 1098-1102.	
		XIAO et al., "Reliability study and failure analysis of fine pitch solder-bumped flip chip on low-cost flexible substrate without using stiffener," <i>IEEE, 2002. Proceedings 52nd</i> , 28-31 May 2002, pp. 112-118.	
		Australian Search Report dated 11 Aug 2004 (3 pages).	
ylbe		Australian Search Report dated 16 Aug 2004 (4 pages).	

Examiner Signature	Jarmike Clark	Date Considered	01/20/05
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Group Art Unit	Unknown
Examiner Name	Unknown
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